

# LBC-HDBT-T/R-48-Lite

LINK BRIDGE™ HDBASET  
HDMI TRANSMISSION WITH  
48V PoH OVER 60M



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## **SAFETY INSTRUCTIONS AND COMPLIANCE DECLARATIONS**

PLEASE OBSERVE THE FOLLOWING SAFETY  
PRECAUTIONS

### **SURGE PROTECTION DEVICE RECOMMENDED**

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

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## 1.0 PRODUCT DESCRIPTION

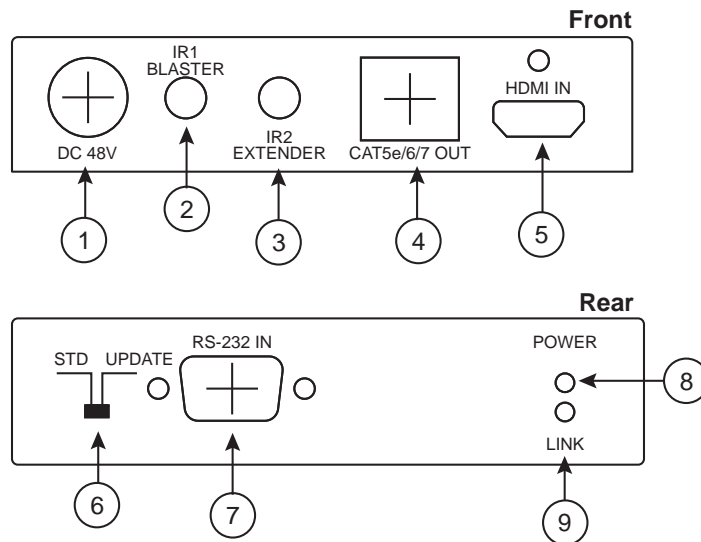
The LBC-HDBT-T/R-48-Lite can send uncompressed audio/video and IP data over a single run of CAT-5e/6/7 cable at a distance up to 60 meters. It has the added benefit of control through the built-in RS-232 and IR ports and a bi-directional LAN serving connection. The Receiver (PD) can be powered by the PoE 48V function of the Transmitter (PSE), allowing for greater flexibility in installations.

### Features

- Extend HDMI Signals up to 60 meters Over One CAT-5e/6 Cable
- Supports Full HDTV Video Resolutions up to 4K2K @ 30Hz
- Fully Uncompressed Video & Audio Provides Zero Loss of Quality
- Supports True DDC/EDID/HDCP Transmission
- Video/Audio+IR+Data+Ethernet, Over 1 CAT-5e/6 Cable
- 48V PoH with PSE/TX and PD/RX
- HDMI 1.4 and HDCP 2.2 compliant
- Supports both RS-232 and IR Control Data

## 2.0 OPERATION CONTROLS AND FUNCTIONS

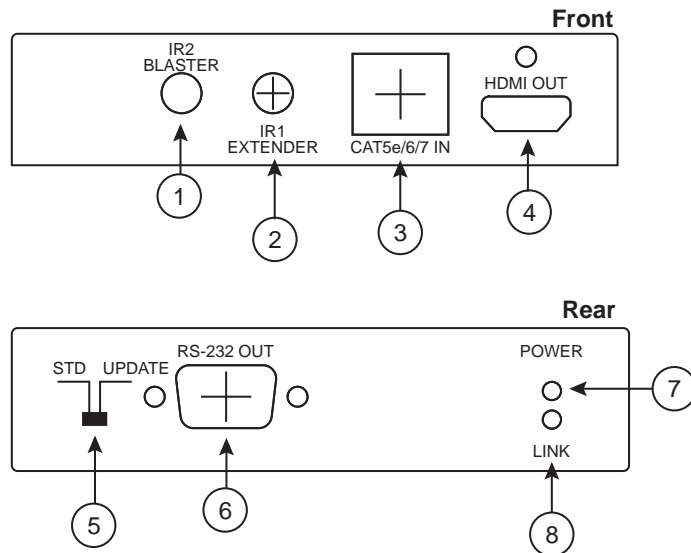
### 2.1 Transmitter Front and Rear Panels



1. **DC 48V:** Plug the 48V DC power supply into the unit and connect the adaptor to an AC outlet.
2. **IR1 BLASTER:** Connect to the supplied IR Blaster cable for IR signal transmission. Place the IR Blaster in direct line-of-sight of the equipment to be controlled.
3. **IR2 EXTENDER:** Connect to the supplied IR Extender cables for IR signal reception. Ensure that remote being used is within the direct line-of-sight of the IR Extender.
4. **CAT-5e/6/7 OUT:** Connect to the Receiver unit with a single CAT5e/6/7 cable for transmission of all data signals.
5. **HDMI IN:** Connect to HDMI source equipment such as a DVD or Blu-ray player.

6. **STD/UPDATE Switch:** This switch is reserved for factory use only.
7. **RS-232 IN:** Connect to a PC or Laptop with D-Sub 9-pin male cable for the transmission of RS-232 commands.
8. **POWER LED:** This LED will illuminate when the device is connected to a power supply.
9. **LINK LED:** This LED will illuminate when both Transmitter and Receiver are connected through CAT cable. When it blinks regularly it states the Transmitter is NOT sending signal but the Transmitter and Receiver are linked and if it blinks irregularly it states an error has occurred.

## 2.2 Receiver Front and Rear Panels



1. **IR2 BLASTER:** Connect to the supplied IR Blaster cable for IR signal transmission. Place the IR Blaster in direct line-of-sight of the equipment to be controlled.
2. **IR1 EXTENDER:** Connect to the supplied IR Extender cables for IR signal reception. Ensure that remote being used is within the direct line-of-sight of the IR Extender.
3. **CAT-5e/6/7:** Connect to the Transmitter unit with a single CAT-5e/6/7 cable for transmission of all data signals.
4. **HDMI OUT:** Connect to a HDMI equipped TV/monitor for display of the HDMI input source signal.
5. **STD/UPDATE Switch:** This switch is reserved for factory use only.
6. **RS-232 OUT:** Connect to the device that is to be controlled (via D-Sub 9-pin female cable) by RS-232 commands.

7. **POWER LED:** This LED will illuminate when the device is connected to a power supply.
  
8. **LINK LED:** This LED will illuminate when both Transmitter and Receiver are connected through CAT cable. When it blinks regularly it states the Receiver is NOT sending signal but the Transmitter and Receiver are linked and if it blinks irregularly it states an error has occurred.

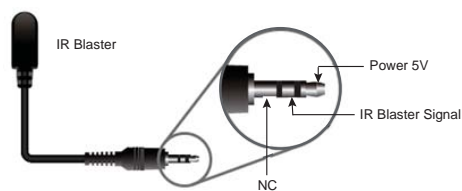


### 3.0 SERIAL CONTROL

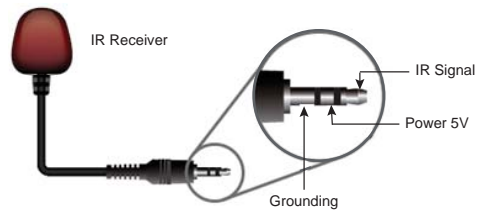
#### 3.1 D-Sub 9 Pin Assignment

Pin	Define TX/RX
1	N/C
2	TxD/RxD
3	RxD/TxD
4	N/C
5	GND
6	N/C
7	N/C
8	N/C
9	N/C

#### 3.2 IR Blaster Cable Pin Assignment



### 3.3 IR Receiver Cable Pin Assignment



## 4.0 MAINTENANCE AND TROUBLESHOOTING

### 4.1 Maintenance

There is no operator maintenance other than keeping the units clean. However, observe the following light indicators to make sure that the unit is working properly:

### 4.2 Troubleshooting

If the LBC-HDBT-T/R-48-Lite units do not operate properly after installation, check for possible cable breaks, loose connections, and incorrect cable connections. If problems persist that may be fiber related, contact BCI at 1-800-214-0222 for further assistance.

For electrical problems, perform the following troubleshooting procedures:

1. **If the POWER indicator is OFF, check for the following:**
  - a. The line cord is plugged into the unit and your outlet has power.
2. **If the POWER indicator is ON, but the Link indicator is OFF, check for the following:**
  - a. Make sure the appropriate cables are being used.
  - b. Cable and cable connectors are not broken.
  - c. For each unit, the transmit (TX) cable is connected to the other unit's receiver (RX).
3. **If the POWER indicator and Link indicator are ON, but the channels are not operating, then:**
  - a. Check to see that the attached user equipment is turned on.
  - b. Both ends of the link are connected to the corresponding equipment and to the same corresponding channel port.

- c. Cable connections at both channels are securely fastened to each connector. Turn the power off, then back on to reset the link.

## 5.0 SPECIFICATIONS

### Video/Audio

HDMI	Version 1.4 with 3D, 4Kx2K support
Video Resolution	Up to 4K2K @ 30Hz
Protocol	DDC/EDID Capable, HDCP 2:2
Video Bandwidth	300MHz / 10.2Gbps
Audio Formats	Supports up to 7.1CH & Dolby TrueHD, DTS-HD Master Audio
Audio Sampling Rate	32KHz to 192KHz
HDMI/Audio Connector	HDMI Female plug

### Data

Serial Control	RS-232
Data Rate	Up to 57.6Kbaud
Connector	DB9 Serial

### IR

Data Rate	30 - 50KHz
In/Out Connectors	3.5mm Stereo

### HDBT Transmission

Cable Type	CAT 5e/6 or higher
Number of Cables	1
Connector/ Distance	RJ-45 / Up to 60m

### Physical

Dimensions	4.25"(W) x 4.57"(D) x 1.14"(H)
Power Consumption	+48VDC @ 0.9 Amps (Max.)
Operating Temperature	0 to +40°C
Humidity	20 to 90% RH, Non-Condensing

## 6.0 SERVICE PROCEDURE

### 6.1 Replacement Policy

Standard products found defective on arrival (DOA) will be replaced, based on availability, within 24 to 48 hours anywhere in the U.S. Please call Customer Service at **800-214-0222** for information.

### 6.2 Return/Repair Service

The LBC-HDBT-T/R-48-Lite System contains no user serviceable components. If you have a problem with your unit, please contact the Customer Service Department. To facilitate our return/repair processing please contact Broadata Communications, Inc. to obtain a Return Material Authorization (RMA). Please include the following information:

- Product model number
- Serial Number
- Complete description of problem
- Hardware installation description

Broadata Communications, Inc.  
2545 West 237th Street, Suite K  
Torrance, CA 90505  
**1-800-214-0222**  
(310) 530-1416  
(310) 530-5958 (Facsimile)  
e-mail: [CustomerService@Broadatacom.com](mailto:CustomerService@Broadatacom.com)  
Website: [www.broadatacom.com](http://www.broadatacom.com)

## **7.0 LIMITED WARRANTY**

Broadata Communications, Inc. (BCI) warrants, for a period of one year from date of shipment, each product sold shall be free from defects in material and workmanship. BCI will correct, either by repair, or at BCI's election, by replacement, any said products that in our sole discretion prove to be defective and are returned to the manufacturing location within 30 days after such defect is ascertained. All warranties are limited to defects arising under normal use and do not include malfunctions or failure resulting from misuse, abuse, neglect, alterations, electrical power problems, usage not in accordance with product instructions, improper installation, or damage determined by BCI to have been caused by the Buyer or repair made by a third party. Limited warranties granted on products are to the initial customer end-user and are not transferable. OUR LIABILITY UNDER THIS WARRANTY SHALL IN ANY CASE BE LIMITED TO THE INVOICE VALUE OF THE PRODUCT SOLD AND BCI SHALL NOT BE LIABLE TO ANYONE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES ARISING FROM THE USE OF ITS PRODUCTS OR THE SALE THEREOF. We make NO WARRANTY AS TO THE MERCHANTABILITY OF ANY GOODS, OR THAT THEY ARE FIT FOR ANY PARTICULAR PURPOSE OR END APPLICATION NOR DO WE MAKE ANY WARRANTY, EXPRESSED OR IMPLIED OTHER THAN AS STATED ABOVE.

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